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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,943	01/23/2004	Naoki Matsuhira	FUJM 20.860 (100794-00535)	5068
26304 7590 08/23/2007 KATTEN MUCHIN ROSENMAN LLP 575 MADISON AVENUE NEW YORK, NY 10022-2585			EXAMINER BELANI, KISHIN G	
			ART UNIT 2143	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/763,943

Applicant(s)

MATSUHIRA, NAOKI

Examiner

Kishin G. Belani

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5 and 6 is/are allowed.
- 6) ☒ Claim(s) 1-4 and 7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is in response to Applicant's amendment filed on 6/14/2007.

Independent Claim 1 has been amended by including additional limitations.

Dependent claims 2-4 and 7 are as originally presented. **Dependent claims 5 and 6** that were objected to in the non-final action dated 03/14/2007, have been amended with all the limitations of the original independent claim 1 to make them ready for allowance. Claims 1-7 are now pending in the present application. The applicant's amendments to the original claims are shown in ***bold and italics***, and the examiner's response to the amendment is shown in **bold** in this office action. **This Action is made FINAL.**

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by **Ozaki et al. (U.S. Patent Application Publication # 2004/0071148 A1).**

Consider **claim 1**, Ozaki et al. clearly show and disclose a router for automatically generating an IP address comprising a position identifier portion and an interface identifier portion (Fig. 1, gateway block 110; paragraph 0008, lines 1-8 which disclose a gateway device (interpreted by the examiner to be functionally equivalent to a router) automatically generating both the IPv6 interface ID and a network ID (interpreted by the examiner to be a position identifier portion of the IPv6 address)), said router comprising:

a routing table for storing each position identifier portion and information on an output route for the position identifier portion (Figs. 5, translation table block 400, and Fig. 9; paragraph 0008, lines 17-21 which disclose how the address translation table (routing table) correlates the IPv6 address with the network identifier portion);

a determining unit for determining for each of a plurality of ports whether a position identifier portion is assigned to a network to which the port is connected (paragraph 0003, lines 1-4 which disclose that a combination of an IP address and a port number is used as an IP identifier for each of a plurality of ports connected to a network;

paragraph 0005, lines 1-8 which disclose that the gateway can assign a unique IP address even to a non-IP device; paragraph 0008, lines 11-13 which disclose that the gateway device has a network ID acquisition unit for acquiring the network ID of the IP network; Fig. 5 and paragraph 0043, lines 5-12 that disclose a translation table 400 used for uniquely associating a device address to a network ID);

a position identifier portion generating unit for ~~referring to~~ **using all of said position identifier portions registered in** said routing table and generating a position identifier

portion different from ***all of*** the position identifier portion registered in said routing table for a port ***when said determining unit determines that the position identifier portion is*** not assigned ~~a position identifier portion to the port~~ (Fig. 5; paragraph 0005, lines 1-8 which disclose that the gateway assigns unique IP address to each device connected to a non-IP network; **the gateway has to search the translation table 400 for all the entries registered in the table to either find a match or if there is no match, to register a new entry**);

a routing unit for receiving routing information including a position identifier portion according to a dynamic routing protocol and registering the routing information in said routing table, and registering routing information including the position identifier portion generated by said position identifier portion generating unit in said routing table and notifying another router of the routing information (Fig. 7, block 120 in which an IPv6 router provides a network ID to a routing unit of the gateway and a register block 504 for recording the network ID in the registration data block 700, which is the routing table; paragraph 0046 that details the translation table registration process; paragraph 0049, lines 6-12 that describe a method for finding the address of the lower layer of the IPv6 using NDP (Neighborhood Discovery Protocol); Fig. 8, blocks 533 and 120; paragraph 0050, lines 3-15 which describe how the NDP is used to notify other routers of the routing information); and

a position identifier portion advertising unit for advertising the generated position identifier portion from the port ***on the position identifier portion*** (Fig. 7, block 511; Fig. 8, blocks 533 and 120 that show the advertising unit for port's generated IPv6 address;

paragraph 0050, lines 3-15 which describe the process of broadcasting the generated IPv6 address using NS (neighbor solicitation) packet).

Consider **claim 2**, and **as applied to claim 1 above**, Ozaki et al. clearly show and disclose a router wherein said determining unit determines whether a position identifier portion is assigned to the network to which the port is connected on the basis of whether a position identifier portion advertised according to a neighbor discovery protocol for IPv6 is received from said port (Fig. 8; paragraph 0049, lines 9-12 that describe a method for finding the address of the lower layer of the IPv6 using NDP (neighbor discovery protocol); and paragraph 0050, lines 3-15 which disclose that after the gateway detects a NS (neighbor solicitation) packet destined for the port, it sets the address of the lower layer of the IP in a neighbor advertisement packet and transmits it to the router 120).

Consider **claim 7**, and **as applied to claim 1 above**, Ozaki et al. clearly show and disclose a router comprising a routing unit for receiving routing information including a position identifier portion according to a dynamic routing protocol and registering the routing information in said routing table, and notifying another router of routing information including the position identifier portion generated by said position identifier portion generating unit (Fig. 7, block 120 in which an IPv6 router provides a network ID to a routing unit of the gateway and a register block 504 for recording the network ID in the registration data block 700, which is the routing table; paragraph 0046 that details

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the translation table registration process; paragraph 0049, lines 6-12 that describe a method for finding the address of the lower layer of the IPv6 using NDP (Neighborhood Discovery Protocol); Fig. 8, blocks 533 and 120; paragraph 0050, lines 3-15 which describe how the NDP is used to notify other routers of the routing information).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ozaki et al. (U.S. Patent Application Publication # 2004/0071148 A1) in view of Miyata et al. (U.S. Patent Application Publication # 2005/0100008 A1).

Consider **claim 3**, and **as applied to claim 1 above**, Ozaki et al. show and disclose the claimed invention except a router in which said position identifier portion generating unit generates said position identifier portion by generating a random number.

In the same field of endeavor, Miyata et al. disclose generating the position identifier portion of the IPv6 address using a random number generating scheme (Figs. 28, blocks 503-509; Figs. 29-31; paragraph 0100, lines 5-8 that describe using a random address creation method for an IPv6 address; paragraph 0101 that describes the same details).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to generate the position identifier portion of the IPv6 address using a random number generating scheme, as taught by Miyata et al. in the gateway of Ozaki et al., so that unique IPv6 addresses can be generated without delaying the network by spending too much computational power.

Consider **claim 4**, and **as applied to claim 1 above**, Ozaki et al. as modified by Miyata et al. show and disclose the claimed invention except a router in which said position identifier portion generating unit generates said position identifier portion by incrementing a maximum position identifier portion registered in said routing table.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to also consider providing a method for generating the position identifier address by sequentially incrementing the maximum (highest) position identifier

address registered in the said routing table. Applicant has not disclosed that providing a method for generating the position identifier address by sequentially incrementing the maximum position identifier address registered in the said routing table provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally well with the position identifier portion being generated by a random number generation method, as taught by Miyata et al. in the gateway of Ozaki et al., because a 16-bit random number can be generated very quickly in a 16-bit shift register made from latches, and would generate a unique address for use as a Site-local aggregation address.

Allowable Subject Matter

Claims 5 and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Consider **claim 5**, the best prior art found during the examination of the present application, **Ozaki et al. (U.S. Patent Application Publication # 2004/0071148 A1)** in view of **Gloe (US Patent Application Publication 2004/0083306 A1)**, fails to specifically disclose the limitation of generating by the router, for an IPv6 aggregatable unicast global address, an SLA value of least significant 16 bits different from SLA

values of least significant 16 bits of all position identifier portions registered in said routing table, said position identifier portions having most significant 48 bits identical with most significant 48 bits assigned to the router, and generates said position identifier portion by combining the SLA value with the most significant 48 bits.

Consider **claim 6**, the best prior art found during the examination of the present application, **Ozaki et al. (U.S. Patent Application Publication # 2004/0071148 A1)** in view of **Gloe (US Patent Application Publication 2004/0083306 A1)**, fails to specifically disclose the limitation of generating by the router, for an IPv6 site-local address, said position identifier portion generating unit generates a subnet ID of least significant 16 bits different from subnet IDs of least significant 16 bits of all position identifier portions registered in said routing table, said position identifier portions having most significant 48 bits identical with most significant 48 bits set fixedly, and generates said position identifier portion by combining the subnet ID with the most significant 48 bits.

Response to Arguments

Applicant's arguments filed 06/14/2007 have been fully considered but they are not persuasive.

The examiner respectfully disagrees with applicant's arguments as the applied reference(s) provide more than adequate support and clarification. The examiner's rejection of 03/14/2007 is maintained.

The applicant's arguments about examiner's references not teaching certain elements of the independent **claim 1** are not persuasive.

Consider **claim 1**, Ozaki's reference (US Patent Application Publication 2004/0071148 A1) does disclose saving the entire IPV6 address (128 bits that include left-64 bits of Position Identifier Portion and the right-64 bits for Interface Identifier Portion, as shown in the applicant's Fig. 10) as listed in paragraph 0043, lines 11-12. Also, the reference does teach that the translation table enables the non-IP device 100 (in Fig. 1) to communicate with IPV6 device 150 in the home, or portable phone 130 or PC 140 connected to the Internet (paragraph 0052, lines 1-4). These are output routes for the non-IP device 100.

The applicant's assertion that the translation table 400 stores only IPV6 address assigned to non-IPV6 device 100 is not explicitly stated in the reference. The applicant himself has stated that "[I]t is therefore an object of the present invention to provide a gateway device which can assign a unique IP address even to a device," on paragraph [0005], lines 1-8. A device can include both an IP as well as a non-IP device. Furthermore, the claim does not specifically exclude a non-IP device from IPV6 address generation.

The applicant has further asserted that the reference does not teach how to generate the unique IP address. Claim 1 also does not include detailed description of how to generate the unique IPV6 address. The details are in claims 5 and 6, which are allowable.

Applicant's further assertion that Ozaki's reference does not include any description of registering network ID in the translation table 400 is improper, because claim 1 does not include registering network ID in the translation table 400. The IPV6 Address column of the translation table 400 does include all sub-fields of a 128-bit IPV6 address.

Now, consider **dependent claims 3 and 4**. They are rejected under 35 U.S.C. 103(a). Therefore, Miyata et al. need not teach any elements that the primary reference Ozaki already taught. It is included as a reference to teach only those elements that Ozaki's reference did not teach. Therefore, the applicant's argument is without merit that Miyata et al. do not teach "using all the interface prefixes or interface IDs registered in a routing table and generating an interface prefixes or an interface ID different from all interface prefixes or interface IDs registered in said routing table for a port".

Therefore, **the rejections of the independent claim 1 as well as their dependent claims 2-4 and 7 are maintained.**

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

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Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Kishin G. Belani whose telephone number is (571) 270-1768. The Examiner can normally be reached on Monday-Thursday from 6:30 am to 5:00 pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, David Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-0800.

Kishin G. Belani

K.G.B./kgb

August 15, 2007


DAVID WILEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100